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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,760	04/16/2004	Peter John Reid	206,506	8784
38137 7590 12/03/2008 ABELMAN, FRAYNE & SCHWAB 666 THIRD AVENUE, 10TH FLOOR NEW YORK, NY 10017				
EXAMINER				
JOHNSON, VICKY A				
ART UNIT		PAPER NUMBER		
3656				
MAIL DATE		DELIVERY MODE		
12/03/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,760

Applicant(s)

REID, PETER JOHN

Examiner

Vicky A. Johnson

Art Unit

3656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 30-34 and 36-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cam follower, the movable cam shaft, a face cam, a drum cam, a knife edge follower, a roller follower, a tapered, threaded, bayonet, push fit locking pin, a side cam structure including a stepped configuration, the locking pin including a threaded portion, a threaded bolt, and a cotter pin must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-29 and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is unclear how the position of the one side cam can effect a change in the profile of only the at least one central cam structure. The specification does not disclose that the profile of the central cam structure changes.

Claims 2--5 are indefinite because it is unclear how they further limit claim 1.

Claim 6 is indefinite because it is unclear because it includes the limitation "either or both."

Claim 7 is indefinite because it is unclear if the "a first cam structure" and the "a second cam structure" are the same elements as the side cam structure and the central cam structure of claim 1.

Claim 8 is indefinite because it is unclear what is being claimed. The applicant has stated in the arguments that the "tapered, threaded, bayonet, push fit locking pin" is not being positively recited.

Claim 12 is indefinite because it is unclear what is being claimed. The applicant has stated in the arguments that the "cam follower" is not being positively recited.

Claim 13 is indefinite because it is unclear if the "at least one cam pivoting apparatus" is the same as the pivoting apparatus of claim 6.

Claim 16 is indefinite because it is unclear if the "at least one side cam structure" is the same side cam structure of claim 14.

Claim 18 is indefinite because it is unclear what is being claimed. The applicant has stated in the arguments that the "stepped configuration" is not being positively recited.

Claim 21 is indefinite because it is unclear if the "apertures" are the same element as the apertures recited in claim 10.

Claim 22 is indefinite because it is unclear what is being claimed. The applicant has stated in the arguments that the "locking pin including a threaded portion" is not being positively recited.

Claim 23 is indefinite because it is unclear if the "apertures" are the same element as the apertures recited in claim 10.

Claim 26 is indefinite because it is unclear what is being claimed. The applicant has stated in the arguments that the "cotter pin" is not being positively recited.

Claim 28 is indefinite because it is unclear what is being claimed. The applicant has stated in the arguments that the "cam follower" is not being positively recited.

Claim 35 is indefinite because it is unclear how the claimed cam system would be able to work with or interact with an existing cam system.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-9 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Krebs (US 733220), as best understood.

Krebs discloses a cam system comprising: at least two cam structures, the at least two cam structures being adapted to co-operate with a cam follower (g) capable of following a preferred profile effected by the configuration of at least one of the at least two cam structures and a movable cam shaft (N), the at least two cam structures including: at least one central cam structure (H) and at least one side cam structure (J), the at least one central cam structure being adapted to receive the movable cam shaft and operate therewith (see Fig 3), the at least one central cam structure further adapted to receive the at least one side cam structure (see Fig 3), the at least one side cam structure being adapted to be variably positioned with respect to the at least one central cam structure thereby effecting a change in the overall profile followed by the cam follower during movement of the cam shaft and the at least two cam structure(s) associated therewith (see Fig 3); wherein the change in profile effected by the positional configuration of the at least one side cam structure relative to the at least one central cam structure enabling variation in the translational motion to the cam follower during movement of the movable cam shaft and the at least two cam structures being movable

therewith and effecting in turn a variation in either or both speed and power of operation of a preferred movement relevant to a mechanical requirement (see Figs 3-6), cam pivoting apparatus (k), cam locking apparatus (see Fig 3).

6. Claims 1-19, 23-26, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Cole (US 3,714,893), as best understood.

Cole discloses a cam system comprising: at least two cam structures including: at least one central cam structure (46) and at least one side cam structure (43), the at least one central cam structure being adapted to receive the movable cam shaft and operate therewith, the at least one central cam structure further adapted to receive the at least one side cam structure, the at least one side cam structure being adapted to be variably positioned with respect to the at least one central cam structure thereby effecting a change in the profile of the at least one central cam structure and in turn effecting a change in the overall profile followed by the cam follower during movement of the cam shaft and the at least two cam structure(s) associated therewith; wherein the change in profile effected by the positional configuration of the at least one side cam structure relative to the at least one central cam structure enabling variation in the translational motion to the cam follower during movement of the movable cam shaft and the at least two cam structures being movable therewith and effecting in turn a variation in either or both speed and power of operation of a preferred movement relevant to a mechanical requirement (see Fig 2), apertures on side cams (56, 57), apertures on central cam (58, 59), locking apparatus (60, 61, 63), the central cam and the side cam

are able to change profiles (col. 3 lines 56-63), the arrangement can be varied to effect mechanical operation (col. 5 lines 50-65).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20-22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole (US 3,714,893), as best understood.

Cole discloses the claimed device as described above, but does not disclose the taper of the locking pin is set at 7 degrees, apertures on the cam structures which are also tapered to 7.degree, the operational speed variations available when the cam system is set at its highest setting with two side cam structures attached compared with its lowest setting is approximately 200%, a comparable incremental increase in the speed generation resulting from the translational motion of the cam follower by 16.6%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to determine the optimum value of the taper of the locking pin, the optimum value of the taper of the aperture, the optimum value of the operational speed variations, and the optimum value of the comparable incremental increase in the speed generation, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). See also MPEP 2144.05.

Response to Arguments

Some further comments regarding the applicant's remarks are deemed appropriate.

The applicant argues that the elements listed in the drawing objection are not positively recited, and are not part of the present invention. This makes most of the claims unclear since some of the claims recite these elements. For example, claim 3 has been amended to recite "wherein the at least two cam structures are adapted to co-operate with the follower which comprises any one of a knife-edge follower, a roller follower". If the cam follower is not positively claimed, what is being claimed in claim 3?

It is also argued that the Krebs references fails to meet the limitations of the claims because Krebs fails to disclose distinct and separate elements for the central cam and the side cam. It is disagreed. The element H and the element J are distinct and separate elements that work together. Further, the claims do not recite the limitation that the central cam and the side cam are "distinct and separate" elements.

The applicant's remarks have been accorded due consideration, however, they are not deemed fully persuasive.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vicky A. Johnson whose telephone number is (571) 272-7106. The examiner can normally be reached on Monday-Friday (7:00a-3:30p).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vicky A. Johnson/
Primary Examiner, Art Unit 3656

